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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/589,636

10/04/2006

Takeshi Kanazawa

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Dickinson Wright PLLC

James E. Ledbetter, Esq.

International Square

1875 Eye Street, N.W., Suite 1200

Washington, DC 20006

EXAMINER

MILLS, DONALD L

ART UNIT

PAPER NUMBER

2416

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/589,636	<b>Applicant(s)</b> KANAZAWA ET AL.	
	<b>Examiner</b> DONALD L. MILLS	<b>Art Unit</b> 2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/16/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement filed 16 August 2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. The Applicant states that all cited documents have been included in the national stage application; however, the cited documents cannot be found in the national stage application. It has been placed in the application file, but the information referred to therein has not been considered.

### ***Specification***

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.

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(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(g) BRIEF SUMMARY OF THE INVENTION.

(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(i) DETAILED DESCRIPTION OF THE INVENTION.

(j) CLAIM OR CLAIMS (commencing on a separate sheet).

(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6,628,620 B1.

Regarding claims 1 and 4, Cain discloses a hierarchical mobile ad-hoc network and methods for route error recovery, which comprises:

*A reception section that receives a radio signal containing packets and detects that communication with a communication apparatus directly transmitting the packets using radio signals, is disconnected; a control section that determines whether the packet routing apparatus is located on a side of a destination wireless terminal apparatus or a side of a source wireless terminal apparatus of the packets; and a transmission section that broadcasts a request signal for route repair to a destination communication apparatus of the packets when communication with the communication apparatus directly transmitting the packets using radio signals is*

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*determined to be disconnected and the packet routing apparatus is determined to be located on the side of the source wireless terminal apparatus* (Referring to Figures 1 and 10, in the case of node failure, either an ordinary node or a cluster leader node 21-33 may experience a failure or shut down. The failure of an ordinary node (i.e., a node other than a cluster leader node 21-33) may equate to potentially several link failures as detected by the neighbors of the node. These nodes may each respond to this failure as if it were a link failure and proceed by testing its path to its cluster leader node to determine if it can remain in the same cluster, if it cannot find a node level route to the cluster leader node it may then associate with another cluster leader node. If the node 11 determines it still has a path to the cluster leader node, it may then reevaluate the cluster association metrics to the cluster leader node and to the cluster leader nodes for adjacent clusters. Another type of failure that is potentially more disruptive is a failure of a cluster leader node. This failure may be detected by neighboring nodes by the link loss, and by other nodes in the cluster by the loss of the periodic CLNANN message broadcasts. Nodes in the same cluster may select an adjacent cluster leader with which they can associate if the cluster association metric is good enough using the procedures defined above, for example. Alternatively, one or more nodes may contend to become a cluster leader node 21-23 using the cluster leader election procedures defined above. See column 7, lines 42-54 and column 8, lines 4-21.)

Regarding claim 2, Cain disclose *the reception section receives a radio signal containing the request signal for route repair; the control section determines whether or not the request signal for route repair is for repairing a route to the packet routing apparatus; and when the request signal for route repair is for repairing the route to the packet routing apparatus, the transmission section broadcasts a request signal for route reestablishment to a source of the*

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*packets* (Referring to Figures 1 and 10, in the case of node failure, either an ordinary node or a cluster leader node 21-33 may experience a failure or shut down. The failure of an ordinary node (i.e., a node other than a cluster leader node 21-33) may equate to potentially several link failures as detected by the neighbors of the node. These nodes may each respond to this failure as if it were a link failure and proceed by testing its path to its cluster leader node to determine if it can remain in the same cluster, if it cannot find a node level route to the cluster leader node it may then associate with another cluster leader node. If the node 11 determines it still has a path to the cluster leader node, it may then reevaluate the cluster association metrics to the cluster leader node and to the cluster leader nodes for adjacent clusters. See column 7, lines 42-54 and column 8, lines 4-21.)

Regarding claim 3, Cain discloses further comprising *a route cache section that stores the communication apparatus directly transmitting the packets using radio signals as a relay candidate, wherein, when communication with the communication apparatus directly transmitting the packets using radio signals is disconnected, the control section deletes a communication apparatus with which communication of the packet routing apparatus is disconnected from relay candidates in the route cache section, and, when the destination apparatus of the packets to relay is not stored in the route cache section, the control section determines that the routing apparatus is located on the side of the source wireless terminal apparatus* (Referring to Figures 1 and 10, the Examiner equates the route cache to the routing table for the cluster nodes, furthermore, a destination device that is unreachable because of its own failure would not appear in the routing table. In the case of node failure, either an ordinary node or a cluster leader node 21-33 may experience a failure or shut down. The failure of an

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ordinary node (i.e., a node other than a cluster leader node 21-33) may equate to potentially several link failures as detected by the neighbors of the node. These nodes may each respond to this failure as if it were a link failure and proceed by testing its path to its cluster leader node to determine if it can remain in the same cluster, if it cannot find a node level route to the cluster leader node it may then associate with another cluster leader node. If the node 11 determines it still has a path to the cluster leader node, it may then reevaluate the cluster association metrics to the cluster leader node and to the cluster leader nodes for adjacent clusters. See column 7, lines 42-54 and column 8, lines 4-21.)

### ***Conclusion***

**5.** Any inquiry concerning this communication or earlier communications from the examiner should be directed to DONALD L. MILLS whose telephone number is (571)272-3094. The examiner can normally be reached on 9:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seena Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Donald L Mills/

Primary Examiner, Art Unit 2416